

TO: Health Care Providers

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SUBJECT: Safe Injection Practices

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Recent outbreaks and investigations of non-hospital health care-associated infections have underscored the need to define and reinforce safe injection practices. Unsafe injection practices may result in transmission of bloodborne viruses and other microbial pathogens to patients during routine health care procedures. A recent review of outbreaks in the United States revealed 33 outbreaks in non-hospital settings in the past decade: 12 in outpatient clinics, 6 in hemodialysis centers, and 15 in long-term care facilities. These outbreaks resulted in 448 persons acquiring hepatitis B virus (HBV) and hepatitis C virus (HCV) infection. In all instances, failure of health care personnel to adhere to basic principles of infection control and aseptic technique resulted in patient-to-patient transmission of disease-causing organisms.¹ A recent outbreak of HBV in New Jersey has been associated with a hematology-oncology practice.

These unfortunate events serve as a reminder that strict adherence to basic infection control practices are critical to patient safety. All health care providers are encouraged to review their infection control practices and the practices of staff under their supervision.

The New Jersey Department of Health and Senior Services (NJDHSS) strongly supports adherence to the safe infection, infusion and medication vial practices endorsed by the Centers for Disease Control and Prevention (CDC) and the Association for Professionals in Infection Control and Epidemiology (APIC). NJDHSS recommends the following:

- Perform hand hygiene prior to accessing supplies, handling vials and intravenous solutions, and preparing or administering medications.
- Use aseptic technique in all aspects of parenteral medication administration, medication vial use, injections and glucose monitoring procedures.
- Store and prepare medications and supplies in a clean area on a dedicated clean surface. Do not store medications in the immediate patient-care environment or store medications in an area where blood or other clinical specimens are processed (e.g., in a laboratory area).
- Never store needles and syringes outside their sterile packaging. Remove needles and syringes from sterile wrappers at the point of care just prior to use.
- Never use bags or bottles of intravenous solution as a common source of fluid for multiple patients.

- Never use fluid infusion and administration sets (e.g., intravenous bags, tubing, connectors) for more than one patient. Dispose of all items immediately after use.
- Begin/initiate administration of spiked intravenous solutions (intravenous bag/bottle entered by the tubing spike) within one hour of preparation. If administration is not begun within one hour of spiking, the intravenous solution and tubing should be discarded. For unspiked intravenous solutions, follow the recommended expiration date of the manufacturer or preparing pharmacy.
- Draw medication from a vial into a syringe at the time of intended use. Administer medication drawn into a syringe within one hour of preparation. Medication not administered within one hour should be discarded unless the manufacturer's or pharmacy's instructions permit otherwise.
- Disinfect intravenous ports or medication-vial septums using friction and 70% alcohol or other approved antiseptic agent. Disinfect skin prior to invasive procedures (e.g., indwelling catheter access, lumbar punctures) according to facility-established protocol using appropriate antiseptic agents. Allow the antiseptic to dry prior to accessing the port or performing the procedure. Do not touch the site with non-sterile gloves or wipe the site with non-sterile gauze after applying the antiseptic agent.
- Use single-dose vials or containers whenever possible. If a multi-dose vial must be used, it should be used for only one patient and then discarded. Each entry into the multi-dose vial must be with a new, unused sterile needle and syringe even if the vial is dedicated to a single patient.
- Never use a single-dose vial or ampoule for multiple patients. Never combine leftover medication for later use. Never transfer medication from one syringe to another.
- Never use medication in a syringe for more than one patient, even if the needle is changed between patients.
- Discard all syringes, needles and cannulae used on an individual patient or anywhere on a patient's administration set.
- Dispose of used needles immediately in an approved sharps container at the point of care. Do not carry needles to a distant site for disposal. Do not recap, bend or remove needles.
- Always follow the manufacturers' instructions for medication storage and use.
- If a multi-dose vial must be used, clearly date all opened multi-dose vials to reflect date opened and/or expiration date. Establish written policies on disposal of opened multi-dose vials. Dispose of opened multi-dose medication vials 28 days after opening, unless specified otherwise by the manufacturer, or sooner if sterility is compromised. Please note that the CDC states that unused portions of multi-dose vials of *vaccines*, stored according to the manufacturers' instructions, may be used until expired, if not contaminated or unless otherwise stated in the

manufacturers' product information.

- Never store vials or syringes in clothing or pockets.
- Never leave a needle, cannula or spike device inserted into a medication-vial septum.
- Adhere to federal and state requirements for protection of health care personnel from exposure to bloodborne pathogens.
- Use safety devices whenever possible. Sharps with attached safety devices must be activated prior to disposal.
- Always use personal protective equipment, including gloves, appropriately. Dispose of gloves immediately after use. Never touch items in the environment (e.g., pens, clipboards) with potentially contaminated gloves. Never prepare medication with the same pair of gloves used to perform patient-care activities or invasive procedures.
- Ensure routine and targeted environmental cleaning occur regularly using approved agents in accordance with the manufacturers' instructions. Allow adequate contact time.
- Adhere to infection control practices for special procedures. For example, wear a surgical mask when placing a catheter or injecting material into the spinal canal or subdural space (i.e., during myelograms, lumbar puncture and spinal or epidural

References

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2. APIC Position Paper: Safe Injection, Infusion and Medication Vial Practices in Healthcare. Available at : http://www.apic.org/Content/NavigationMenu/GovernmentAdvocacy/PublicPolicyLibrary/SafeInjections_final.pdf (accessed August 1, 2009)
3. Centers for Disease Control and Prevention, Infection Control in Healthcare Settings, at <http://www.cdc.gov/ncidod/dhqp/index.html>
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